NUTRIENT AGRI PRODUCTS™
Micros that drive performance

Sulfur as a Nutrient for Plants

Sulfur is found in amino acids which are considered building blocks of protein, and as a result 90% of the sulfur is utilized for that purpose. Sulfur is essential for chlorophyll formation. It is a major constituent of one of the enzymes required for the formation of the chlorophyll molecule.

Sulfur is essential for the synthesis of oils, especially in oil crops. It is now recognized as the 4th critical macronutrient behind nitrogen, phosphorous and potassium. In oil crops, legumes and forages, and some vegetables, sulfur is required in considerable quantities.

Sulfur cannot just be absorbed by the plant. Sulfur in organic matter must be released from the organic material and then go through a mineralization process (due to microbial activity) where it is converted to a sulfate (SO4 .2) form. This being one the reasons, zinc sulfate, manganese sulfate, etc. become excellent sources of micro ingredients. Due to the negative charge the sulfate inorganic form has, it is mobile in the soil.

Sulfur leaches out of the soil easily, so that topsoil may be deficient, but sub soil will have higher levels of sulfur.

Sulfur deficiencies occur more often in sandy soils, or soils with low organic material (less than 2%) and under high rainfall. Sulfur is immobile in plants and does not readily transmit from older leaves to younger leaves. Sulfur deficiency shows up first in the younger leaves, as a light green to yellow green color. Deficient plants are small and growth is retarded.

In corn, sulfur deficiency shows up as interveinal chlorosis.

In wheat, sulfur deficiency shows itself with the whole plant becoming pale.

In potatoes, sulfur deficiency shows up with many young leaves being chlorotic.

Sulfur can be recycled back into the soil through crop residue, but with corn and alfalfa, much of the protein is removed with the crop.

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